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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,541	01/02/2002	Lawrence A. Clevenger	YOR9-2001-0508-US1	9395
28211	7590	04/16/2004	EXAMINER	
FREDERICK W. GIBB, III MCGINN & GIBB, PLLC 2568-A RIVA ROAD SUITE 304 ANNAPOLIS, MD 21401			LUK, LAWRENCE W	
			ART UNIT	PAPER NUMBER
			2838	
DATE MAILED: 04/16/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/039,541

**Applicant(s)**

CLEVINGER ET AL.

**Examiner**

Lawrence W Luk

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,7,8 and 10-20 is/are rejected.
- 7) ☒ Claim(s) 3,6 and 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____   |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____  | 6) <input type="checkbox"/> Other: ____                                     |

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5, 11 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Galli (5,882,106).

As to claims 1 and 2, Galli discloses in Figure 3 and column 8, line 65 to column 9, line 23, at least one battery 106; at least one integrated circuit chip 104 (see Figure 7) powered by the at least one battery 106; and a package 108 having a pair (e.g., 164, 166; or 148, 150; or 152, 154; or circular recess 168, etc.) of opposed upright ends, said package 108 connected to any of said at least one battery and said at least one integrated chip; in particular, Galli discloses in Figure 3 and column 5, lines 23+ the battery 106 connected in the rear portion 158 of the package 108; wherein said at least one integrated circuit chip 104 (see column 6, line 64-67, Integrated circuit chip 104 is in circuit board 198) is disposed between said at least one battery 106 and said package 198. (see figure 3).

As to claim 5, Galli discloses in Figure 3, at least one battery 106; at least one integrated circuit chip 104 powered by the at least one battery, and a package 108 connected to any of the at least one battery and the at least one integrated circuit chip, wherein the at least one battery 106 connects to a pair of opposed upright ends (circular

recess 106) of the package 108, and wherein said at least one integrated circuit chip 104 is disposed between said at least one battery 106 and said package 198. (see figure 3).

As to claim 11, Galli in Figures 3 and 7 an integrated chip structure, comprising an integrated circuit chip 220; a battery 106 directly connected to the integrated circuit chip; and a package 108 having a pair (e.g. 164, 166; or 148, 150; or 152, 154; or circular recess 168, etc.) of opposed upright ends, wherein the package 108 is connected to any of the battery and the integrated circuit chip, wherein said integrated circuit chip 104 is disposed between said battery 106 and said package 198.

As to claim 14, Galli discloses in Figure 3 a package 108 which completely surrounds the battery 106 and the integrated circuit chip 104 (see Figures 7).

4. Claims 1, 4, 16-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Link et al. (4,998,888).

As to claims 1, Link et al. discloses in Figure 3 and column 2, line 21-52, at least one battery (24, 26); at least one integrated circuit chip (16, see column 2, line 26, the package 14 includes an integrated circuit; and figure 4, integrated circuit is a lead frame 16) powered by the at least one battery (24, 26); and a package (14) having a pair (e.g., 54, 64; or 70, 58; or circular recess 20, 22 etc.) of opposed upright ends, wherein the package (14) is connected to any of said at least one battery (24, 26) and said at least one integrated chip (16); wherein said at least one integrated circuit chip (16) is

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disposed between said at least one battery (24, 26) and said package (14). (see figure 1).

As to claim 4, Link et al. discloses in Figure 2, at least one battery (24, 26) connects to an underside of the package (14).

As to claim 16, Link et al. disclose in figure 1 and 3, a package having a pair of opposed upright ends (e.g., 54, 64; or 70, 58; or circular recess 20, 22, etc.); an integrated circuit chip (16) mounted on said package (14); and a battery (24, 26) directly connected to said package and electrically connected to said integrated circuit chip (16), wherein said integrated circuit chip (16) is disposed between said battery (24, 26) and said package (14).

As to claim 17, Link et al. disclose in figure 3, the battery (24, 26) held adjacent to the integrated circuit chip (16) by the package (14).

As to claim 18, Link et al. disclose in figure 3, the package (12) is between the battery (24, 26) and the integrated circuit chip (16).

As to claim 19, Link et al. disclose in figure 3, column 4, lines 32-36, the battery (24, 26) directly connected to the package (14) and electrically connected (74, 76) to the integrated circuit chip (16).

As to claim 20, Link et al. disclose in figure 3, the battery comprises multiple batteries (24, 26) stacked on the package (14).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galli (5,882,106) in combination with Marholev et al. (6,085,342).

As to claims 7, 8 and 10, as described above, Galli discloses the elements as claimed except for a multi-chip module.

Marholev et al. disclose a multi-chip system in col.2, lines 46-51 for performing a number of functionalities.

It would have been obvious to person having ordinary skill in the art at the time of the invention was made to modify the device of Galli to include a multi-chip system as taught by Marholev et al. so that the device can perform multiple function.

7. Claims 12, 13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Galli (5,882,106) in view of Kazem-Goudarzi et al. (5,540,379).

As to claims 12, 13 and 15, Galli does not disclose the solder connections between the battery and the integrated circuit chip. Kazem-Goudarzi et al. disclose in column 2, lines 44-47, that soldering is used to form a bond between a component and the substrate. It would have been obvious to one having ordinary skill in the art at the

time of the invention was made to use solder connections as taught by Kazem-Goudarzi et al. in Galli's circuit in order to bond the battery to the chip.

***Allowable Subject Matter***

8. Claims 3, 6 and 9 are objected to as being dependent upon a rejected base claim.

In re claims 3, 6 and 9, the prior art of record fails to teach or reasonably suggest a system level device has at least one battery overhanging at least one integrated circuit chip, wherein the battery is larger than the chip.

Claims 3, 6 and 9 would be allowable if rewritten in independent from including all of the limitations of the base claim.

***Response to Arguments***

9. Applicant's arguments with respect to claims 1, 2, 4, 5, 7, 8 and 10-20 have been considered, but are moot in view of the new ground(s) of rejection. Applicant's arguments filed 1/22/2004 have been fully considered, but they are not persuasive.

A. Applicant argues that the prior art does not show in claims 1, 5, 7, 10, 11 and 16, said 'wherein said at least one integrated circuit chip, integrated circuit chip is in circuit board is disposed between said at least one battery and said package.' Galli shows

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wherein said at least one integrated circuit chip 104 (see column 6, line 64-67, integrated circuit chip 104 is in circuit board 198) is disposed between said at least one battery 106 and said package 198. (see figure 3).

**B.** Applicant argues that the prior art of record does not teach or reasonably suggest that ' at least one battery overhanging at least one integrated circuit chip, wherein the battery is larger than the chip.' Galli disclose in figure 10, at least one battery (circular is a battery 106) overhanging at least one integrated circuit chip (104), wherein the battery is larger than the chip (figure 10, unit 104, figure 3, unit 106, 198).

### ***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.



Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence W Luk whose telephone number is (571)272-2080. The examiner can normally be reached on 7 a.m. to 5 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on (571)272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LWL

April 13, 2004

*Lawrence Luk*  
*examiner*  
*4/13/04*